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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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John Murtagh

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EXAMINER

FARAGALLA, MICHAEL A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/696,553	Applicant(s) MURTAGH ET AL.	
	Examiner MICHAEL FARAGALLA	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-21 and 23-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-21 and 23-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/31/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 15-21, and 23-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-17, 20, and 26, and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Marin et al (Patent number: US 6,298,232)** in view of **Hamalainen et al (Patent number: US 6,570, 860)**.

Consider Claims 15 and 26, Marin et al show a method, as well as a mobile network node for delivering a short message from a foreign mobile network to a user or application server in a home mobile network, the home and foreign networks operating with non-compatible protocols, the method comprising the steps of:

(a) As SC/GMSC of the foreign network querying a pseudo HLR in the home network, said pseudo HLR operating with the protocol of the foreign network, to determine a serving MSC (see figure 5; column 4, lines 50-67; column 5, lines 1-20); (the foreign network is read as the GSM network which is sending an SM to the IS-41 based network which is read as the home network).

(b) The pseudo HLR providing to the foreign network SMSC an address of a pseudo MSC in the home network, said pseudo MSC operating with the protocol of the foreign network (see figure 5; figure 6B); (in step 645 the visited network subscriber No. and location information is retrieved on order to forward the SMS message).

(c) The foreign network SC/GMSC routing the message to the pseudo MSC (see figures 5, and 6B).

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(d) A mobile network node in the home network performing protocol conversion of the message to an access protocol and routing the message using said access protocol to a receiving node in the home network (see figure 5); (in order to route a message from one network that uses one protocol to a network that uses another protocol, protocol conversion is needed).

However, Marin et al shows SC/GMSC but does not specifically show SMSC, wherein the pseudo MSC terminates the message delivery attempt by sending an acknowledgement to the foreign network SMSC.

In related art, Hamalainen et al show SMSC, wherein the pseudo MSC terminates the message delivery attempt by sending an acknowledgement to the foreign network SMSC (see column 8, lines 70-67; column 9, lines 1-10); (the MSC-B sends the serving MSC-A an acknowledgement message Send End Signal Req, from which MSC-A knows that the MS has been handed over to a new base station system in MSC-B).

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to incorporate the teaching of Hamalainen et al into the teaching of Marin et al in order to notify the previous network that the mobile was attached to, is now handed off to the new network (see Hamalainen et al; column 9, lines 1-10).

Consider Claim 32, Marin et al show a mobile network node adapted to deliver a short message from a foreign mobile network to a user or application server in a home mobile

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network, the home and foreign networks operating with non-compatible protocols, the mobile network node being adapted to reside in the home network and comprising a pseudo HLR operating with the protocol of the foreign network and a pseudo MSC operating with the protocol of the foreign network, and the mobile network node being adapted to perform the steps of:

- (a) As SC/GMSC of the foreign network querying a pseudo HLR in the home network, said pseudo HLR operating with the protocol of the foreign network, to determine a serving MSC (see figure 5; column 4, lines 50-67; column 5, lines 1-20); (the foreign network is read as the GSM network which is sending an SM to the IS-41 based network which is read as the home network).
- (b) The pseudo HLR providing to the foreign network SMSC an address of a pseudo MSC in the home network, said pseudo MSC operating with the protocol of the foreign network (see figure 5; figure 6B); (in step 645 the visited network subscriber No. and location information is retrieved on order to forward the SMS message).
- (c) The foreign network SC/GMSC routing the message to the pseudo MSC (see figures 5, and 6B).
- (d) A mobile network node in the home network performing protocol conversion of the message to an access protocol and routing the message using said access protocol to a receiving node in the home network (see figure 5); (in order to route a message from one network that uses one protocol to a network that uses another protocol, protocol conversion is needed).

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(d) Wherein the mobile network node is adapted to generate an error code including error codes indicating network resource shortage, destination out of service, message termination denied, and network failure (see figure 12; column 8, lines 53-67; column 9, lines 1-10).

However, Marin et al shows SC/GMSC but does not specifically show SMSC, wherein the pseudo MSC terminates the message delivery attempt by sending an acknowledgement to the foreign network SMSC.

In related art, Hamalainen et al show SMSC, wherein the pseudo MSC terminates the message delivery attempt by sending an acknowledgement to the foreign network SMSC (see column 8, lines 70-67; column 9, lines 1-10); (the MSC-B sends the serving MSC-A an acknowledgement message Send End Signal Req. from which MSC-A knows that the MS has been handed over to a new base station system in MSC-B).

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to incorporate the teaching of Hamalainen et al into the teaching of Marin et al in order to notify the previous network that the mobile was attached to, is now handed off to the new network (see Hamalainen et al; column 9, lines 1-10).

Consider Claim 16, Marin et al show a method as claimed in claim 15, wherein the receiving node is a home network SMSC and the method comprises the further step of the home network SMSC routing the message to a destination user or application

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server (see figure 5; column 3, lines 10-25); (voice messages are forwarded to mobile terminals in the recipient network).

Consider Claims 17 and 29, Marin et al show a method as claimed in claim 15, as well as the mobile network node of claim 26, wherein the receiving node is an inter-working gateway, and said inter-working gateway routes the message to a home network SMSC and the home network SMSC routes the message to a destination user or application server (see figures 5 and 11).

Consider Claims 20 and 28, Marin et al show a method as claimed in claim 15, as well as the mobile network node of claim 26, wherein the pseudo HLR and the pseudo MSC communicate with the foreign network SMSC via a signaling network (figures 5 and 11).

Consider Claim 30, Marin et al show a mobile network node as claimed in claim 26, wherein the mobile network node is adapted to generate an error code including error codes indicating network resource shortage, destination out of service, message termination denied, and network failure (see figure 12).

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Consider Claim 31, Marin et al show a mobile network node as claimed in claim 26, wherein the mobile network node is adapted to perform address translation (see figures 5 and 9).

5. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Marin et al (Patent number: US 6,298,232)** in view of **Hamalainen et al** and further in view **Vogel et al (Publication number: US 2002/0077786)**.

Consider Claims 23-25, Marin et al in view of Hamalainen et al show a method as claimed in claim 15, wherein:

(a) The receiving node is an inter-working gateway, and said inter-working gateway routes the message to a home network SMSC and the home network SMSC routes the message to a destination user or application server (see figure 5; column 4, lines 50-67; column 5, lines 1-20); (the foreign network is read as the GSM network which is sending an SM to the IS-41 based network which is read as the home network).

(b) The mobile network node operates as a pseudo SMSC adapted to operate with the protocol of the foreign network when communicating with the foreign network and with an access protocol when communicating with elements of the home network, and said

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pseudo SMSC sends the message to the inter-working gateway using the access protocol (see figures 5 and 11).

However, Marin et al in view of Hamalainen et al do not specifically show that the pseudo SMSC, in case of delivery failure due to a temporary condition, performs a retry of sending the message to the inter-working gateway and receives a delivery acknowledgement.

In related art, Vogel et al show that the pseudo SMSC, in case of delivery failure due to a temporary condition, performs a retry of sending the message to the inter-working gateway and receives a delivery acknowledgement (see paragraph 88).

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to incorporate the teaching of Vogel et al into the teaching of Marin et al and Hamalainen et al in order to deliver the message successfully (see ogle et al; paragraph 88).

6. Claims 19 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Marin et al (Patent number: US 6,298,232)** in view of **Hamalainen et al** and further in view **Smith et al (Publication number: US 2003/0069031)**.

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Consider Claims 19 and 35, Marin et al in view of Hamalainen et al show the method as claimed in claim 15, but fail to specifically show that the access protocol is SMPP over IP.

In related art, Smith et al shows that the access protocol is SMPP over IP (see paragraphs 38 and 39).

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to incorporate the teaching of Smith et al into the teaching of Marin et al and Hamalainen et al in order to communicate with a message distribution center (MDC) (see Smith et al; abstract).

7. Claims 18, 27 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Marin et al (Patent number: US 6,298,232)** in view of **Hamalainen et al** and further in view **Comer et al (Patent number: US 6,856,808)**.

Consider Claims 18, 27 and 21, Marin et al do not specifically show a method as claimed in claim 15, as well as the mobile node of claims 20 and 26, but do not specifically show that the receiving node is an SMS application server, and that the signaling network is an SS7 network.

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In related art, Comer et al show that the receiving node is an SMS application server, and that the signaling network is an SS7 network (see column 6, lines 55-67; column 7, lines 1-10).

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to incorporate the teaching of Comer et al into the teaching of Marin et al and Hamalainen et al in order for the SMSC to interface with the currently popular digital cellular systems (see Comer et al; column 1, lines 32-45).

8. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Marin et al (Patent number: US 6,298,232)** in view of **Hamalainen et al** and further in view of **Granstam et al (Patent number: US 6,587,691)**.

Consider Claims 33 and 34, Marin et al in view of Hamalainen et al do not specifically show that the access control protocol is UCP over IP.

In related art, Granstam et al show that the access control protocol is UCP over IP (see figure 1; column 1, lines 27-40).

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to incorporate the teaching of Granstam et al into the teaching of Marin et al and Hamalainen et al in order to for the messaging exchange to be implemented in any communications system (see Granstam et al; column 1, lines 1-10).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL FARAGALLA whose telephone number is (571)270-1107. The examiner can normally be reached on Mon-Fri 7:30 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/Michael Faragalla/
Examiner, Art Unit 2617

10/08/2009